

me that, since Targioni-Tozzetti's original material is lost, an Italian specimen could be designated as neotype without recourse to the Commission.

(4) Thanks to Dr. E. Tremblay of the Istituto di Entomologia Agraria, Portici, Naples, Italy, I have received 10 slides, each containing one specimen of *Dactylopius longispinus* Targioni-Tozzetti from *Cycas revoluta* growing in the Botanical Gardens in Florence 29 October, 1979. I here designate a specimen from this series as neotype and have marked the slide as such. It is very probable that Targioni-Tozzetti collected from this locality. The neotype is deposited at the Portici Institute. Other specimens from the material provided by Dr. Tremblay will be deposited in (1) Florence, (2) British Museum (Natural History) London, (3) United States National Museum, Washington, D.C. (4) Muséum National d'Histoire Naturelle, Paris, (5) University of California, Davis, (6) Pretoria, South Africa, (7) Zoological Institute, Academy of Sciences, Leningrad, (8) Virginia Polytechnic Institute, Blacksburg and (9) Mexico City.

(5) In their paragraph 12, Danzig & Kerzhner state that *Dactylopius longispinus* was proposed as a replacement name for *Coccus adonidum* Linnaeus. Actually Targioni-Tozzetti realised that *C. adonidum* was misidentified by most authors, who were dealing with a species different from the one described by Linnaeus. *D. longispinus* is therefore a name for a previously undescribed species, not a replacement name, and Article 72d is inappropriate. I accordingly propose to amend Danzig & Kerzhner's proposals as follows:

(1)(f) delete.

(7) read 'place the specific name *longispinus* Targioni-Tozzetti as published in the binomen *Dactylopius longispinus* and as interpreted by reference to the neotype designated in paragraph 4 of this note (specific name of type species of *Pseudococcus* Westwood, 1840 by designation under the plenary powers in (1)(d) above) on the Official List of Specific Names in Zoology'.

COMMENTS ON THE PROPOSED DESIGNATION OF A TYPE SPECIES FOR *GNATHODUS* PANDER, 1856 (CONODONTA). Z.N.(S.)2279 (see vol. 36, pp. 57–62, 201–202; vol. 37, p. 67)

(1) by H. Kozur (*Staatliche Museen Meiningens, Schloss Elisabethenburg, Meiningen, DDR*). See also comment (3)

In recent years Alekseev (lecture to the 1975 Congress on Carboniferous Stratigraphy in Moscow), Kozur & Mostler, 1976, Barskov, Alekseev & Goreva, 1977, and Lane & Ziegler, 1979, have discussed the taxonomic status of *Gnathodus* Pander, 1856. The conclusions of Alekseev, 1975, Kozur & Mostler, 1976, and Barskov, Alekseev & Goreva, 1977, are nearly identical. They proposed to use *Dryphenotus* Cooper, 1939, for the Lower Carboniferous GNATHODIDAE of the '*Gnathodus*' *semiglaber* – '*G.*' *bilineatus* and '*G.*' *girtyi* groups because the Upper Carboniferous type species of *Gnathodus*, *G. mosquensis* Pander, 1856, is certainly not congeneric with those Lower Carboniferous forms. Barskov, Alekseev & Goreva, 1977, proposed to restrict *Gnathodus* to *G. mosquensis* and regarded that name as a *nomen dubium*. They suggested that future studies might demonstrate the identity of *Gnathodus* with *Streptognathodus* Stauffer & Plummer, 1932 or *Idiognathodus*

Gunnell, 1931. Kozur & Mostler, 1976, regarded *Streptognathodus* as a junior synonym of *Gnathodus* and suggested that *S. cancellosus* (Gunnell, 1931) might be a junior synonym of *G. mosquensis* (they did not, as Barskov, Alekseev & Goreva, 1977, and Lane & Ziegler, 1979, wrongly state, positively affirm that synonymy), because the only platform conodonts in the Dorogomilov horizon (from which the type material of *G. mosquensis* came) are *S. cancellosus* and *S. oppletus* Ellison, 1941, and the latter cannot be compared with *G. mosquensis*. Barskov, Alekseev & Goreva, 1977, did not include *S. cancellosus* in *Streptognathodus*, but this view is not accepted by any other conodont workers.

Lane & Ziegler, 1979, expressed quite different conclusions on the taxonomic status of *Gnathodus*. They proposed that *G. texanus* Roundy be designated as a new type species of *Gnathodus* and that the genus be restricted to Lower Carboniferous species. This is quite unwarranted and its acceptance would set up a precedent against the Code for the following reasons:

(1) as clearly shown by Barskov, Alekseev & Goreva, 1977, the type material of *G. mosquensis* came from the Dorogomilov Horizon of Upper Carboniferous (Kasimovian) age. A Lower Carboniferous age is quite impossible in the context of the geology of this region;

(2) the opinion of Lane & Ziegler, 1979, that *Gnathodus* 'has always been thought to be dominantly Lower Carboniferous in age' is not correct. Until recently *Gnathodus* was used for a wide range of Lower, Middle and Upper Carboniferous, and even for Permian Gnathodidae. Because conodont-bearing beds are much more widely distributed in the Lower Carboniferous than in the Middle Carboniferous-to-Permian, there are many more papers on Lower Carboniferous conodonts (including '*Gnathodus*') than on Middle Carboniferous-to-Permian ones. But the percentage of papers on Middle Carboniferous-to-Permian conodonts in which *Gnathodus* is mentioned is very high. In recent years, many Lower Carboniferous species of *Gnathodus* have been transferred to *Protognathodus* Ziegler, 1969, and *Paragnathodus* Higgins, 1975, and many new genera have also been introduced for the Middle Carboniferous-to-Permian forms. Even so, *Gnathodus* has been used frequently in the last 10 years for Middle Carboniferous-to-Permian GNATHODIDAE, e.g.:

Lane, Merrill, et al., 1971 (Middle and Upper Carboniferous): *G. bassleri* (Harris & Hollingsworth, 1933), *G. bassleri symmetricus* Lane, 1967, *G. roundyi* Gunnell, 1931, *G. noduliferus* (Ellison & Graves, 1941), *G. dilatus* Stauffer & Plummer, 1932, and a 'Pennsylvanian *Gnathodus* lineage' (p. 376);

Rabe, 1977 (Middle Carboniferous to Permian): *G. bassleri*, *G. bassleri symmetricus*, *G. bucamangus* Rabe, 1977, *G. lateralis* (Higgins & Bouckaert, 1968), *G. noduliferus*, *G. roundyi*, *G. whitei* (Rhodes, 1963);

Requadt, Becker et al., 1977 (Middle Carboniferous): *G. bassleri symmetricus*;

Wang, 1978 (Permian): *G. hanzhongensis* Wang, 1978.

(3) Lane & Ziegler's argument that the future application of *Gnathodus* to Lower Carboniferous GNATHODIDAE would preserve nomenclatural stability in both palaeontological and stratigraphical literature is wrong. Collin-

son, Rexroad & Thompson, 1971 (table 1) used *Gnathodus* in only seven, not eight, of the major stratigraphic subdivisions. Moreover, two of those species (*G. kuehni* and *G. kockeli*) belong to *Protognathodus* Ziegler, 1969 and the others must be placed in *Dryphenotus* Cooper, 1939. Lane, Merrill, *et al.*, 1971, used *Gnathodus* seven times for major subdivision of the Pennsylvanian (Middle and Upper Carboniferous). Most of these species can now be placed in *Neognathodus* Dunn, 1970.

(4) In both the Lower and the Middle-Upper Carboniferous most GNATHODIDAE have until recently been placed in *Gnathodus* and in both cases they were used to name stratigraphical subdivisions. We cannot therefore choose as the new type species a Lower Carboniferous species that certainly does not belong in the same genus as the original type species, the Upper Carboniferous *G. mosquensis*.

We therefore ask the Commission to reject Lane & Ziegler's proposals. In the present state of knowledge, *Gnathodus* must be rejected as a *nomen dubium* unless a new type species is designated from the type horizon in the type area (Dorogomilov Horizon, Kasimovian). In the latter case *Streptognathodus* Stauffer & Plummer, 1932, which contains the only platform species of that horizon, would fall as a junior synonym of *Gnathodus*.

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(2) By H.R. Lane and W. Ziegler

Dr. Kozur stated that he does not agree with our request to the Commission concerning *Gnathodus mosquensis*, type species of the conodont genus *Gnathodus*, for the following reasons:

1. The type material of *Gnathodus mosquensis* Pander, 1856 is from the Dorogomilov Horizon of Upper Carboniferous (Kasimovian Stage) and thus cannot be Lower Carboniferous in age.

2. *Streptognathodus cancellosus* (Gunnell) is the only species occurring in the Dorogomilov Horizon that is similar to Pander's illustrations of *Gnathodus mosquensis* and therefore probably is conspecific with the latter taxon.

We are asking the Commission to exercise its plenary powers to set aside all designations of type species hitherto made for the nominal genus *Gnathodus* Pander, 1856, and having done so, to designate *Gnathodus texanus* Roundy, to be the type species of that genus. We are proposing *Gnathodus texanus* Roundy (1926, p. 12, pl. II, figs. 7a–8b), not its junior secondary homonym *Polygnathus texanus* Roundy (1926, p. 14, pl. III, figs. 13a–13b) to be the new type species. (The valid name for this latter species is *Gnathodus bilineatus* (Roundy, 1926) by the action of Hass, 1953, p. 79.)

Our request is made in the interest of nomenclatural stability. The massive nomenclatural changes that will be necessary if a neotype is selected from the Kasimovian Stage will create much confusion in conodont paleontology and stratigraphy. We asked the Commission to approve our request for the following reasons:

1. The morphologic details necessary for establishing the affinities of *Gnathodus mosquensis* Pander, 1856, type species by monotypy of the conodont genus *Gnathodus*, are unavailable. Attempts to establish these morphologic details have been frustrated because:

a. The primary types of the species are lost (Barskov, Alekseev & Goreva, 1977; 1978) and to our knowledge no specialist, other than the original author, has ever studied them.